

AUTOMATIC GENERATION OF FLOW
CONTROL FRAMES

Abstract of the Disclosure

An automatic flow control mechanism that supports two modes of automatic flow control is provided in a network interface. In the first flow control mode, the network interface periodically compares the number of available receive descriptors with low and high threshold values. When the number of available receive descriptors falls below the low threshold value, the network interface sends a PAUSE frame requesting the link partner to suspend its transmission (in a full-duplex mode), or enables the back pressure mechanism (in a half-duplex mode). When the number of available receive descriptors rises above the high threshold value, the network interface sends a PAUSE frame requesting the link partner to resume its transmission (in a full-duplex mode), or disables the back pressure (in a half-duplex mode). In the second flow control mode, when the network interface detects that the number of available receive descriptors is less than the low threshold value, it transmits a PAUSE frame requesting the link partner to suspend its transmission for a time period corresponding to a preprogrammed pause value (in a full-duplex mode), or enables the back pressure mechanism, at least, for a time interval defined by a pause timer loaded with the preprogrammed pause value (in a half-duplex mode).

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